

NASA TECH BRIEF

Marshall Space Flight Center



NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the National Technical Information Service, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Office, NASA, Code KT, Washington, D.C. 20546.

Computer Design of Extension Springs

The problem:

Tension spring requirements were previously calculated by hand for various sets of input parameters. The design of such springs is a long and tedious operation, with the final selection often being the first spring to fit within the allowable limits.

The solution:

A computer program speeds up the design process of tension springs and simultaneously optimizes the design by varying the input.

How it's done:

The program is used in calculations for extension springs with hook ends. Input parameters consist of the maximum load limit, spring rate, material physical data, hook radius, and selected spring and wire diameters.

Notes:

1. This program is written in FORTRAN IV for use on the IBM-360 computer.
2. Requests for further information may be directed to:

COSMIC
112 Barrow Hall
University of Georgia
Athens, Georgia 30601
Reference: B71-10473

Patent status:

No patent action is contemplated by NASA.

Source: D.R. Moore of
North American Rockwell Corp.
under contract to
Marshall Space Flight Center
(MFS-24073)

Category 09